

AMENDMENTS TO THE CLAIMS

1.-177. (Cancelled)

178. (Currently Amended) A method ~~for analyzing a nucleic acid~~ comprising providing a nucleic acid, labeled with a unit specific marker, detecting a fluorescent signal from the unit specific marker bound to the nucleic acid after exposure to electromagnetic radiation, storing a signature of signals ~~to analyze the nucleic acid~~, wherein the nucleic acid is moved relative to the electromagnetic radiation by a polymerase, and the unit specific marker is labeled with a fluorophore that emits the fluorescent signal in the absence of fluorescence resonance energy transfer.

179. (Currently Amended) A method ~~for identifying~~ detecting a unit specific marker bound to a nucleic acid comprising moving a nucleic acid past electromagnetic radiation using a polymerase, exposing a fluorescently labeled unit specific marker bound to the nucleic acid to the electromagnetic radiation, and detecting an electromagnetic radiation signal from the fluorescently labeled unit specific marker in the absence of fluorescence resonance energy transfer.

180. (Previously Presented) The method of claim 178, wherein the electromagnetic radiation is transported through a waveguide.

181. (Previously Presented) The method of claim 179, wherein the electromagnetic radiation is transported through a waveguide.